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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/829,360

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Thomas R. Giallorenzi

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08/23/2006

HARRINGTON & SMITH, LLP  
4 RESEARCH DRIVE  
SHELTON, CT 06484-6212

EXAMINER

SEFCHECK, GREGORY B

ART UNIT

PAPER NUMBER

2616

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

09/829,360

Applicant(s)

GIALLORENZI ET AL.

Examiner

Gregory B. Sefcheck

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13 is/are allowed.
- 6) ☒ Claim(s) 14, 15 and 17 is/are rejected.
- 7) ☒ Claim(s) 16, 18, and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

- Applicant's Request for Continued Examination filed 6/8/2006 is acknowledged.
- Claims 1, 3, and 4 have been amended.
- Claims 14-19 have been added.
- Claims 1-19 remain pending.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 14, 15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gitlin et al. (US005442625A), hereafter Gitlin, in view of Duran et al. (US006115608A), hereafter Duran.

- In regards to Claims 14 and 17,

Gitlin discloses a CDMA system and method providing variable data rate access to a user (Title).

Referring to Fig. 2, Gitlin discloses the system having a base station 290 and mobile units 1-N. Each of those components of the system are provided with transmitter 250 having multiple bonded transmitters and receivers capable of varying code and frequency to achieve a variable bandwidth, variable rate multiple access

system (Col. 1, lines 6-10; Col. 3, lines 7-51; claim 14,17 – using a variable bandwidth waveform with multiple bonded transmitters and receivers each agile in frequency and code to provide a variable bandwidth and variable rate multiple access system).

Gitlin discloses that the bonded CDMA system enables variable and dynamic bandwidth capacity access at variable rates (Title; Col. 1, lines 6-10 and 40-42; Col. 3, lines 30-41; claim 14 – channel bonding enables system to operate in at least one of a variable, contiguous or non-contiguous bandwidth at a finely variable rate).

Though CDMA inherently enables sharing of the spectrum, allowing transmissions to overlap in both the time and frequency domain, Gitlin does not explicitly disclose the system as a combination of CDMA and FDMA with channel bonding across both code and frequency space.

Duran discloses systems in which properties of CDMA, FDMA and TDMA may be combined to enhance particular operational characteristics of a system (Abstract; claim 14,17 – defining system as combined CDMA and FDMA; channel bonding across code and frequency space).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system and method of Gitlin by combining the advantages of channel bonding in CDMA and FDMA, as shown by Duran, in order to handle more communication channels at the same time (Duran; Col. 3, lines 38-41).

- In regards to Claims 15,

Gitlin discloses a CDMA system providing variable data rate access that covers all limitations of the parent claim.

It is inherent that channel bonding across frequency space bonds FDMA sub-bands together.

### ***Allowable Subject Matter***

3. Claims 1-13 are allowed.
4. Claims 16, 18, and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Response to Arguments***

5. Applicant's arguments filed 6/8/2006 have been fully considered but they are not persuasive.

- In the Remarks on pgs. 8-12 of the Amendment, Applicant contends that rejection of previous claim 3, now incorporated into new claims 14 and 17, is improper because Gitlin admittedly does not disclose a system that combines FDMA with CDMA.

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- The Examiner respectfully disagrees. As previously explained in past Office Actions and several interviews with Applicant's representative, the Examiner's position is that Gitlin's disclosure of channel bonding in a CDMA system extends to a combined CDMA/FDMA system when combined with the teachings of Duran. The advantages of channel bonding in code space taught by Gitlin would be equally applicable to frequency space when combined with the teachings of Duran, thus meeting the claimed limitations of claims 14 and 17.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory B. Sefcheck whose telephone number is 571-272-3098. The examiner can normally be reached on Monday-Friday, 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GBS *GBS*  
8-16-2006

*Seema S. Rao*  
SEEMA S. RAO 8/21/06  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600